

ADA 026726

14 SDCS-ER-76-92

9 Technical rept.

1

6

(SDCS)

**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT,
NTS Event 'STRAIT', 17 March 1976.**

10

K.J. Hill, M.S. Dawkins, and M.D. Gillispie
Alexandria Laboratories

Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

11 June 1976

12 16 p.

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

Sponsored By

**The Defense Advanced Research Projects Agency
Nuclear Monitoring Research Office**

1400 Wilson Boulevard, Arlington, Virginia 22209

15

F08606-74-C-0013, ARPA Order 100-2897

Monitored By

VELA Seismological Center

312 Montgomery Street, Alexandria, Virginia 22314

DDC
RECEIVED
JUL 14 1976
A

16

VT/4703

405601

LB

Disclaimer: Neither the Defense Advanced Research Projects Agency nor the Air Force Technical Applications Center will be responsible for information contained herein which has been supplied by other organizations or contractors, and this document is subject to later revision as may be necessary. The views and conclusions presented are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Defense Advanced Research Projects Agency, the Air Force Technical Applications Center, or the US Government.

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1 REPORT NUMBER SDCS-ER-76-92	2 GOVT ACCESSION NO.	3 RECIPIENT'S CATALOG NUMBER
4 TITLE (and Subtitle) SPECIAL DATA COLLECTION SYSTEM (SDCS) NTS Event "STRAIT", 17 March 1976		5 TYPE OF REPORT & PERIOD COVERED Technical
		6 PERFORMING ORG REPORT NUMBER
7 AUTHOR(s) Hill, K. J., Dawkins, M. S., and Gillispie, M. D.		8 CONTRACT OR GRANT NUMBER(s) F08606-74-C-0013
9 PERFORMING ORGANIZATION NAME AND ADDRESS Teledyne Geotech 314 Montgomery Street Alexandria, Virginia 22314		10 PROGRAM ELEMENT PROJECT TASK AREA & WORK UNIT NUMBER T/4703
11 CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency Nuclear Monitoring Research Office 1400 Wilson Blvd.-Arlington, Virginia 22209		12 REPORT DATE May 28, 1976
14 MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) VELA Seismological Center 317 Montgomery Street Alexandria, Virginia 22314		13 NUMBER OF PAGES 15
		15 SECURITY CLASS (of this report) Unclassified
		15a DECLASSIFICATION DOWNGRADING SCHEDULE
16 DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED		
17 DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18 SUPPLEMENTARY NOTES		
19 KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20 ABSTRACT (Continue on reverse side if necessary and identify by block number)		

SDCS EVENT REPORT NO. 92

NTS Event "STRAIT", 17 March 1976

NTIS	Write Section	<input checked="" type="checkbox"/>
DOC	Diff Section	<input type="checkbox"/>
UNANNOUNCED		<input type="checkbox"/>
JUSTIFICATION		
BY		
DISTRIBUTION/AVAILABILITY CODES		
Dist.	AVAIL. NO. OF SPECIAL	

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	m _b	M _s
NORSAR	14:56:32.4	14:45:06	38 N	116 W	5.6	N/A
Hagfors	14:56:40.7	14:45:02	38 N	116 W	6.1	4.5

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

14:45:01.5; 37.1N, 116.1W; 5.7, N/A

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. All LP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at all SDCS stations were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be $16^{\circ} \pm 5^{\circ}$ based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 17 MAR 76
14:45:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
LAO	14 47 53.2	-0.1	0.2	12.0	34.4
RK-ON	14 49 45.8	0.0	-0.3	21.0	42.3
CPSO	14 50 22.0	0.0	0.3	24.5	84.4
WH2YK	14 50 39.5	0.1	0.4	26.5	339.0
PN-WV	14 51 00.1	-0.1	-0.1	28.8	75.9
HN-MF	14 52 08.1	0.4	0.1	36.5	60.3
NAO	14 56 32.4	-0.3	-0.7	73.2	24.2

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
14:45:09.2	37.305N	115.927W	41. CALC	0.2	3	7
14:45:01.5	37.139N	116.053W	0. REST	0.4	2	7

CALC
1 . 1
0 . 0
0 . 3 2
.
0 . 0 0
0 . 0
0 . 0

REST
1 . 1
0 . 0
0 . 3 2
.
0 . 0 0
0 . 0
0 . 0

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.69
MAJOR 61.6KM. MINOR 37.9KM. AZ= 31 AREA= 7332 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 17 MAR 76
14:45:00.0 37.000N 116.000W OKM.

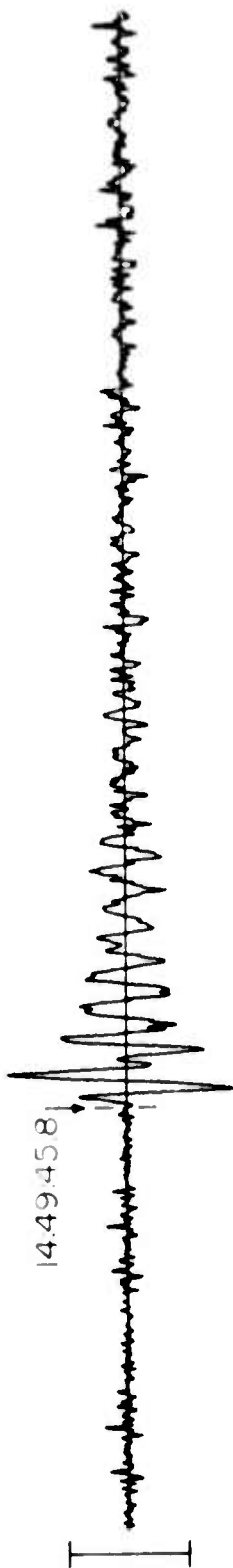
STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
LAO	EP	14 47 53.2		SAB	99.9	9999.				
RK-ON	EP	14 49 45.8		SPZ	0.9	2142.	6.13			21.0
RK-ON	LQ	14 57 32.0		LPT	21.0	930.				
RK-ON	LR	14 58 35.0		LPZ	13.0	3954.		6.04		21.0
CPSO	EP	14 50 22.0		SPZ	1.0	815.	6.02			24.5
CPSO	LQ	14 58 33.0		LPT	19.0	233.				
CPSO	LR	15 00 16.0		LPZ	14.0	669.		5.34		24.5
WH2YK	EP	14 50 39.5		SPZ	0.9	93.	5.11			26.5
WH2YK	LQ	14 59 52.0		LPT	20.0	1599.				
WH2YK	LR	15 02 00.0		LPZ	16.0	346.		5.08		26.5
PN-WV	EP	14 51 00.1		SPZ	1.0	112.	5.35			29.3
PN-WV	LQ	15 00 48.0		LPT	19.0	223.				
PN-WV	LR	15 02 43.0		LPZ	14.0	480.		5.25		29.3
HN-ME	EP	14 52 08.1		SPZ	1.0	339.	5.78			36.5
HN-ME	LQ	15 04 43.0		LPT	20.0	145.				
HN-ME	LR	15 07 28.0		LPZ	15.0	214.		5.01		36.5
NAO	EP	14 56 32.4		AB	0.9	128.	5.69			73.2

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA
14:45:09.2	37.305N	115.927W	41. CALC	5.63	0.41	6
14:45:01.5	37.139N	116.053W	0. REST	5.68	0.39	5

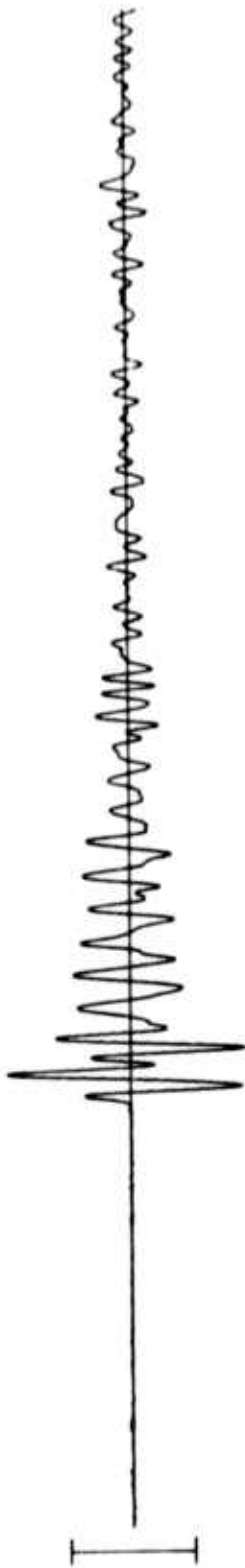
Average long-period magnitude (M_s) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

RK-ON 17 MAR 76

SPZ
1316.70 MU



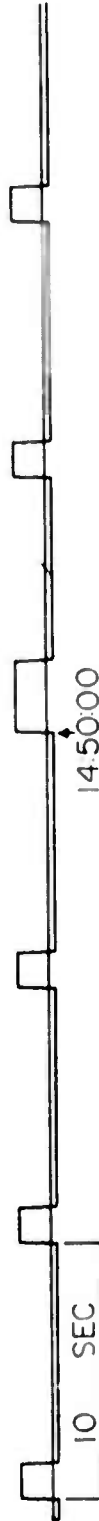
SPR
913.78 MU



SPT
195.54 MU



TIME



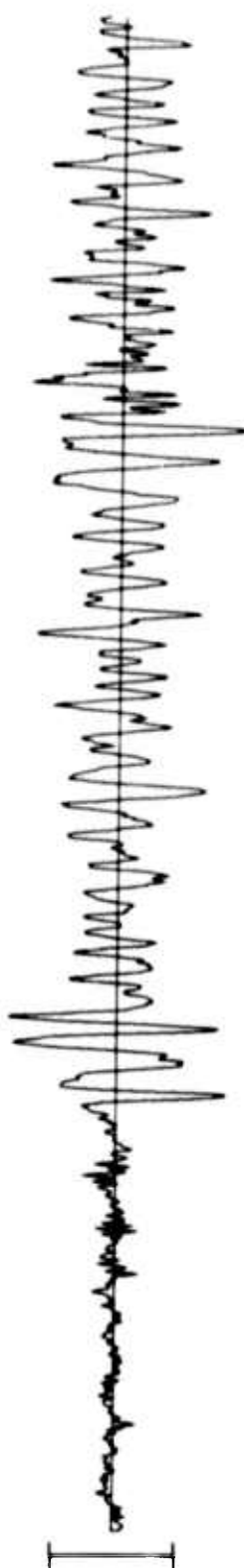
CPSO 17 MAR 76

SPZ
418.11 MU

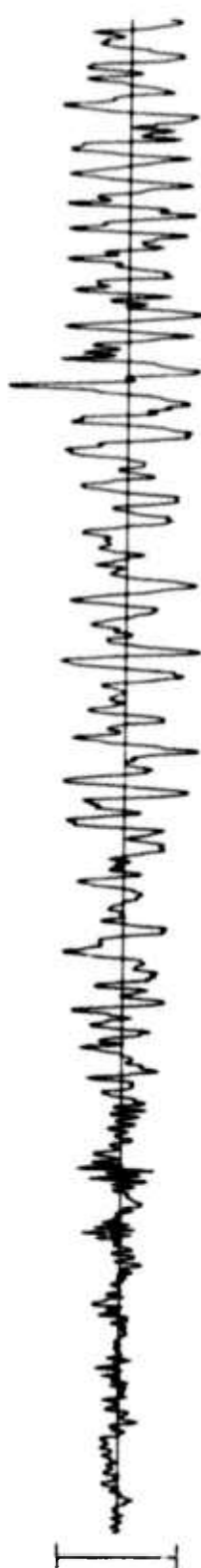
145022.0



SPR
93.73 MU



SPT
85.44 MU



TIME



WH2YK 17 MAR 76

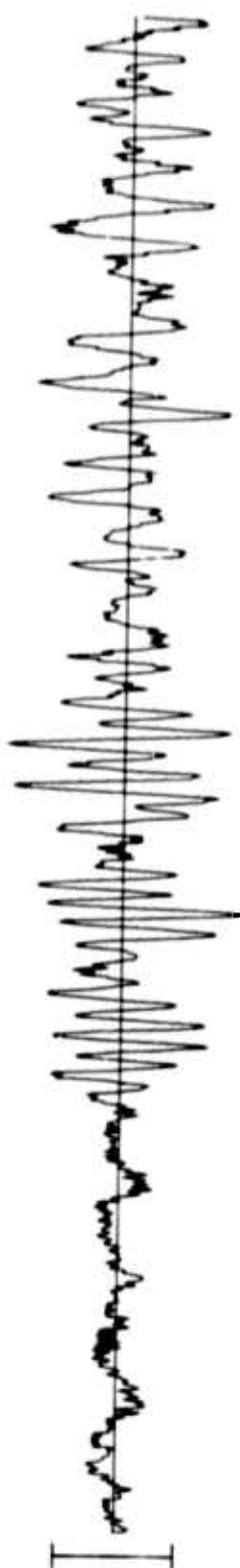
SPZ
61.71 MU



SPR
33.50 MU



SPT
32.42 MU



TIME



FN-WV 17 MAR 76

14:51:00.1

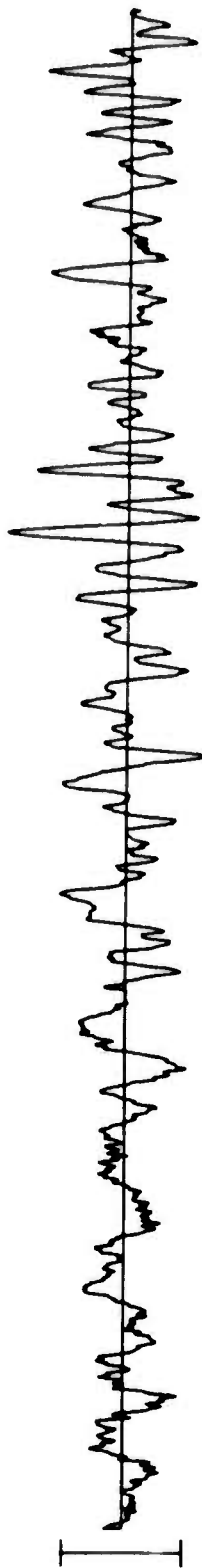
SPZ
65.97 MU



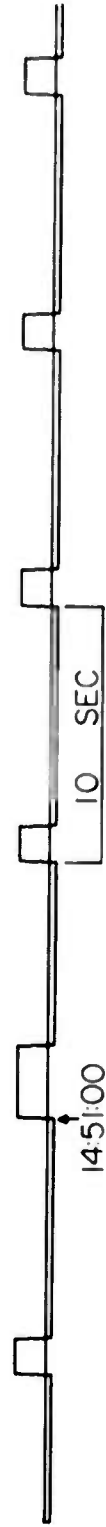
SPR
51.26 MU



SPT
38.17 MU



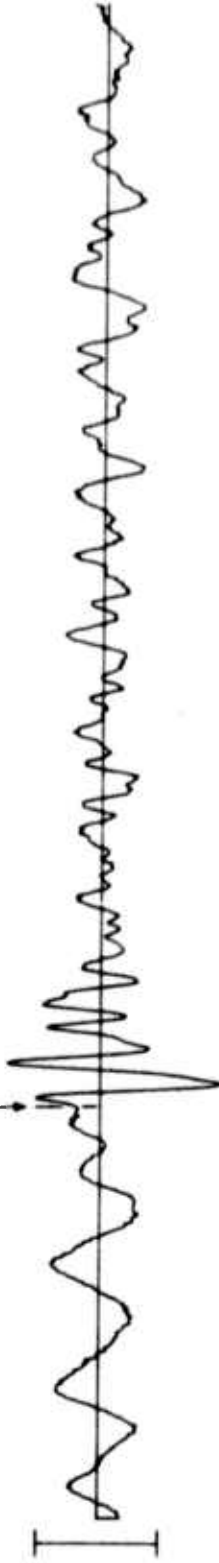
TIME



HN-ME 17 MAR 76

SPZ
226.66 MU

1452081



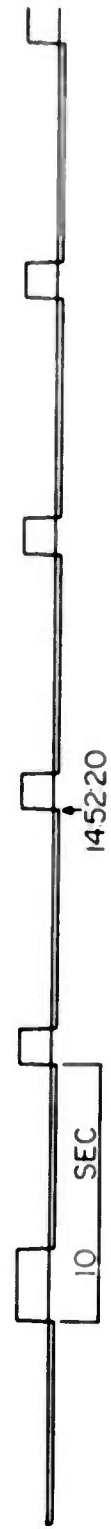
SPR
124.49 MU



SPT
129.96 MU



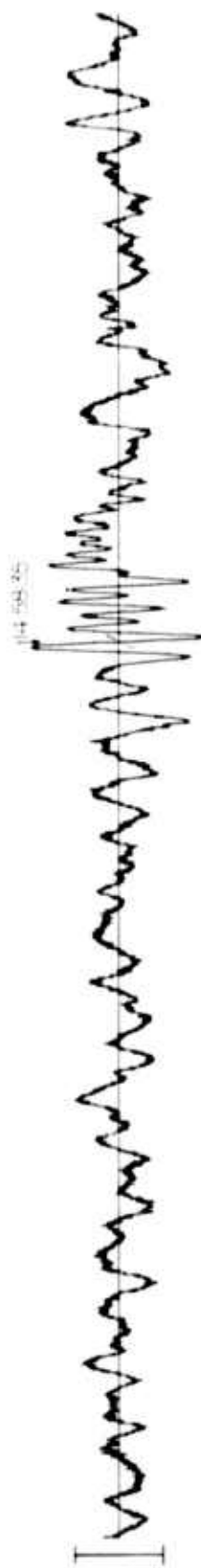
TIME



RK-ON 17 MAR 76

LPZ
10977.08

MU



LPR
16533.51

MU



LPT
12617.52

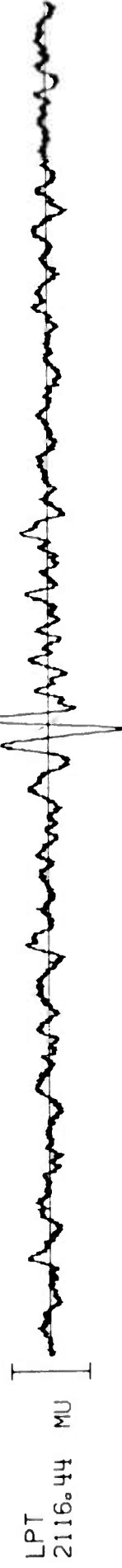
MU



TIME



CPS0 17 MAR 76



WH2YK 17 MAR 76

LPZ
2191.77 MU

1502.00

LPR
1821.17 MU

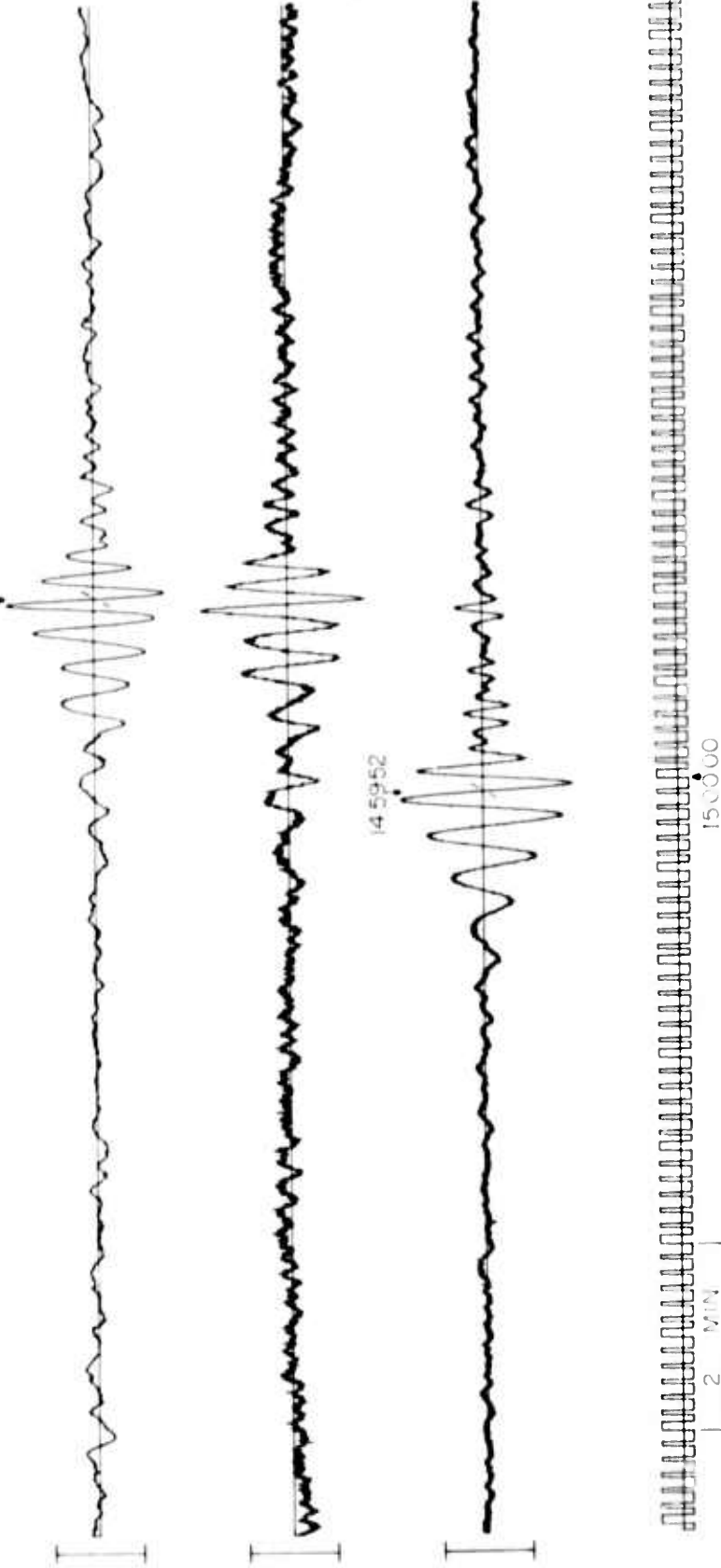
1459.52

LPT
1773.97 MU

TIME

2 MIN

1500.00



FN-WV 17 MAR 76

LPZ
1912.45 MU

1512.43

LPR
1434.26 MU

1500.48

LPT
1783.82 MU

TIME



HN-ME 17 MAR 76

